

S. of Hills - 5/17 1917.

Homestead 5/19 "

Park. 5/24 "

Brighton, 5/25 "

Mason City 5/26 "

Photopi 5/27 1917

" 6/8-10 "

Mason City 6/18 "

Wilton to
Moscow, 6/28 1917

Homestead, July "

Eldora - 7/31 "

Portville to
Waukon, 8/11- 1917

Waukon to 8/ "

New Albion 8/2-13

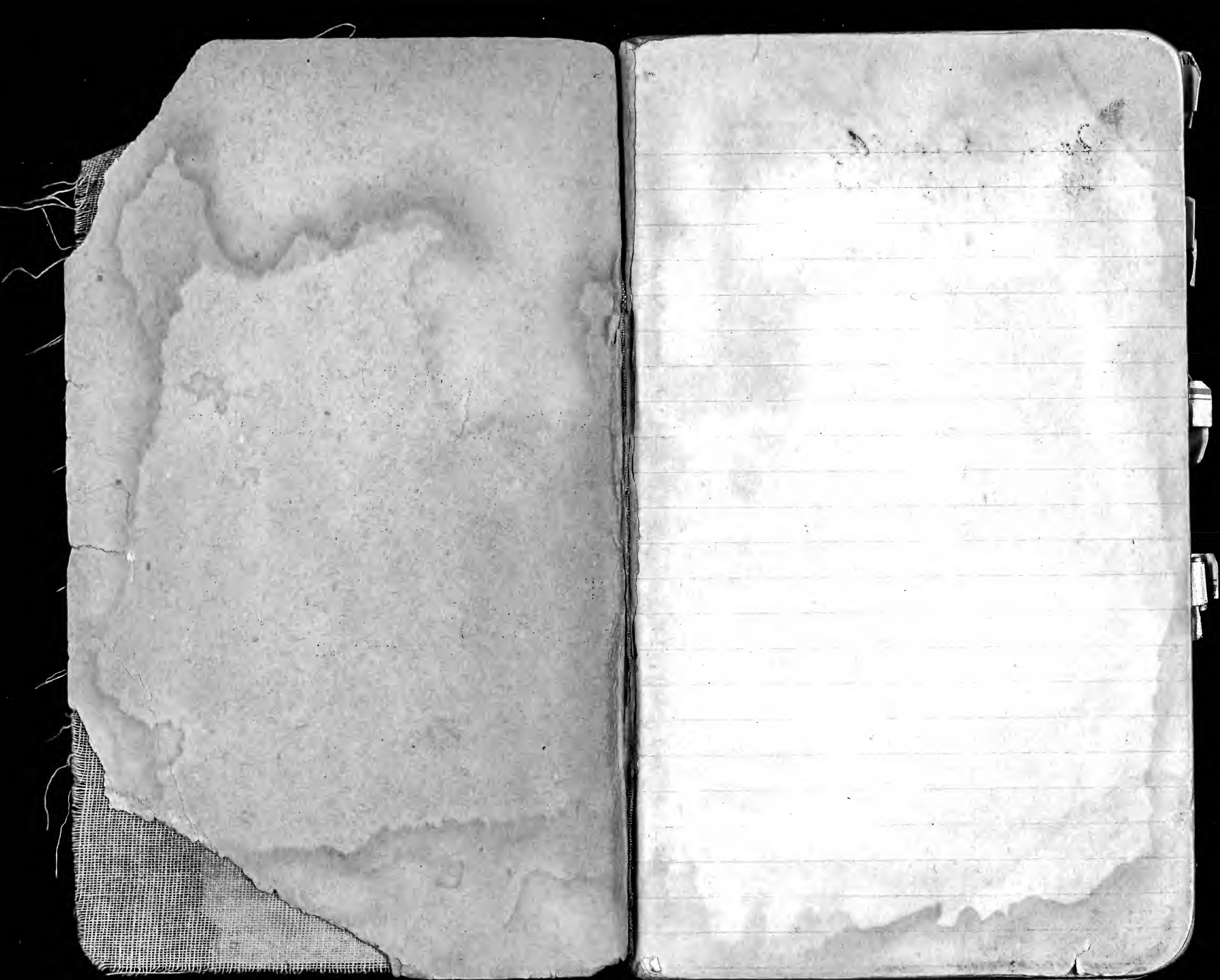
Waukon to Portville 8/14 "

Mechanicsville 8/12 1917

Sabula 8/13 "

Muscataine to 6/17 "

Wilton
Burlington 6/18 "



16.00

45.00

8.24

669.24

Shells 25.00

Muscle 25.00

Wentworth 25.00

\$144.24

Joe Grinnell

10; 27 -

11; 55

12:25

1:52

DEPARTMENT OF BOTANY
B. SHIMEK
HEAD OF DEPARTMENT

THE STATE UNIVERSITY OF IOWA
IOWA CITY, IOWA

○ = elm -
 X = Birch

Buck

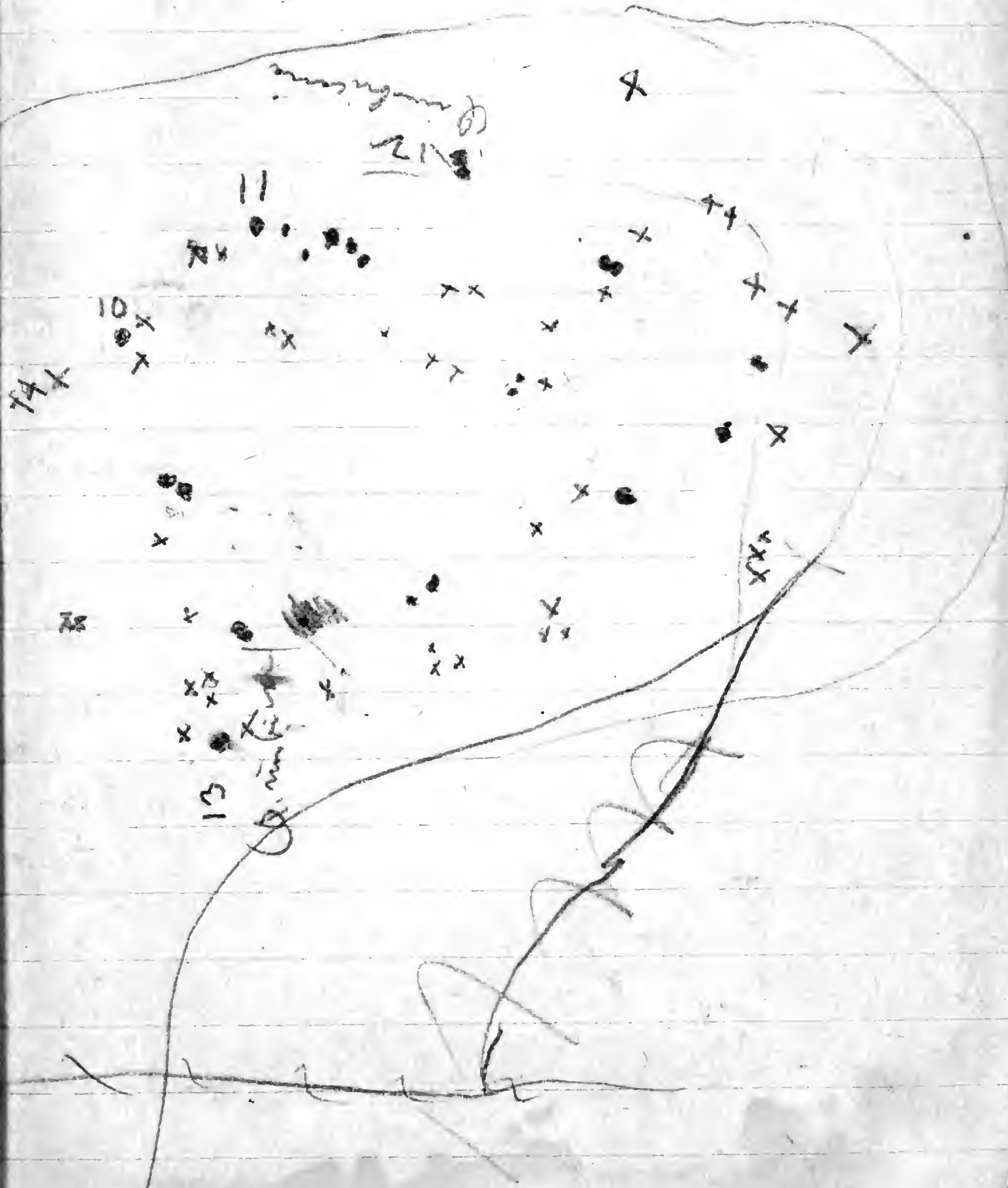
Hybrid

(Camp = Q. umbellata)

Q. palustris

Q. prinus (L.)

○ = Q. bicolor
 X = Q. macrocarpa



S. of Hills

May 17, 1917

Oak (hybrid) 4 - East tree

No. 1 - (vine) half way up E. side of
crown.

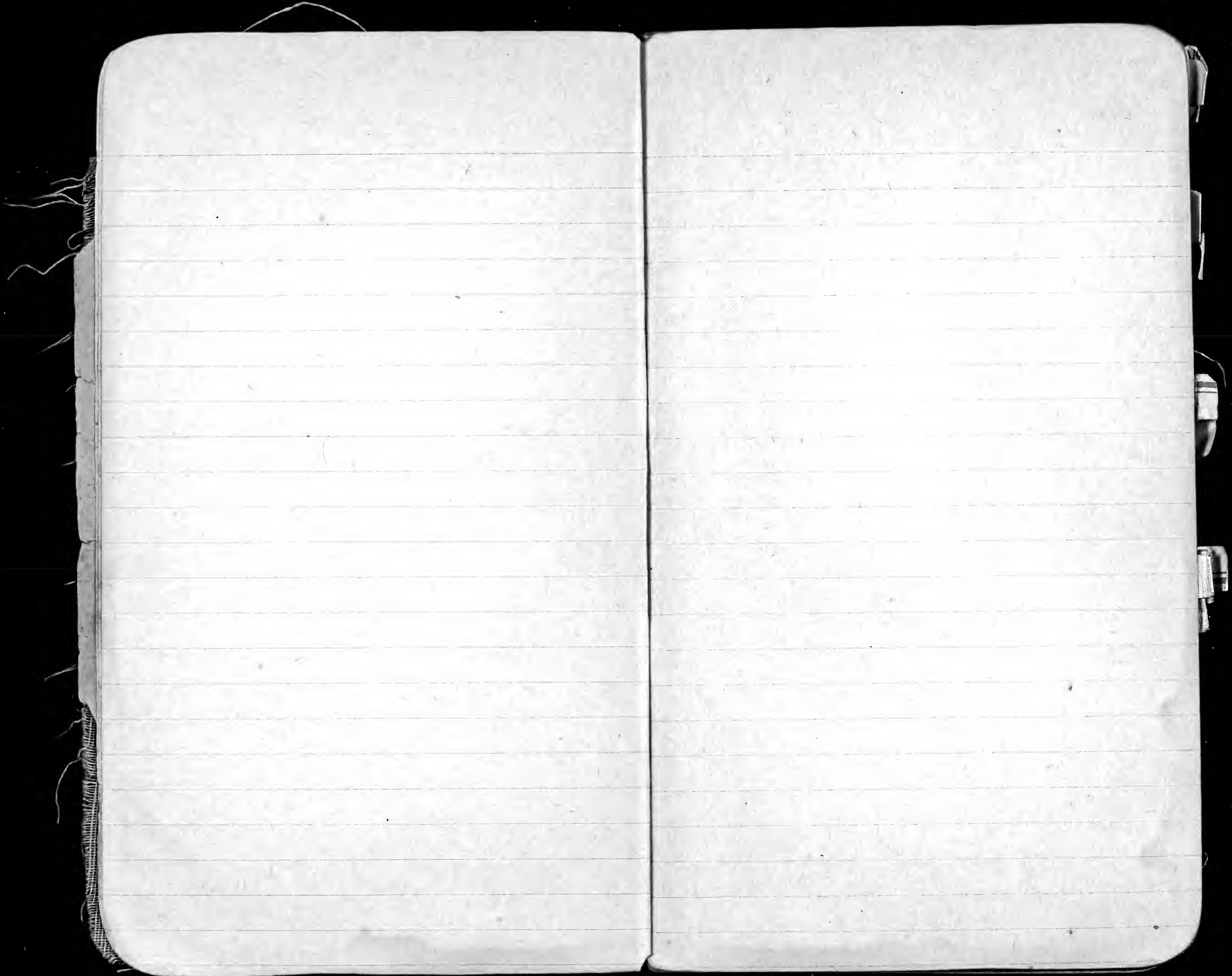
No. 2 - (vine) at bottom E. side of crown

Oak 12 *Q. imbricaria*
only pistillate flower - low

No. 3 (vine) oak 7 -
Q. palustris -

No. 5 - (vine) Oak 13 *Q. imbricaria*
(all staminate, nearly)
1/2 way up crown, S.W. side

No. 6 - (vine) base of crown (13)

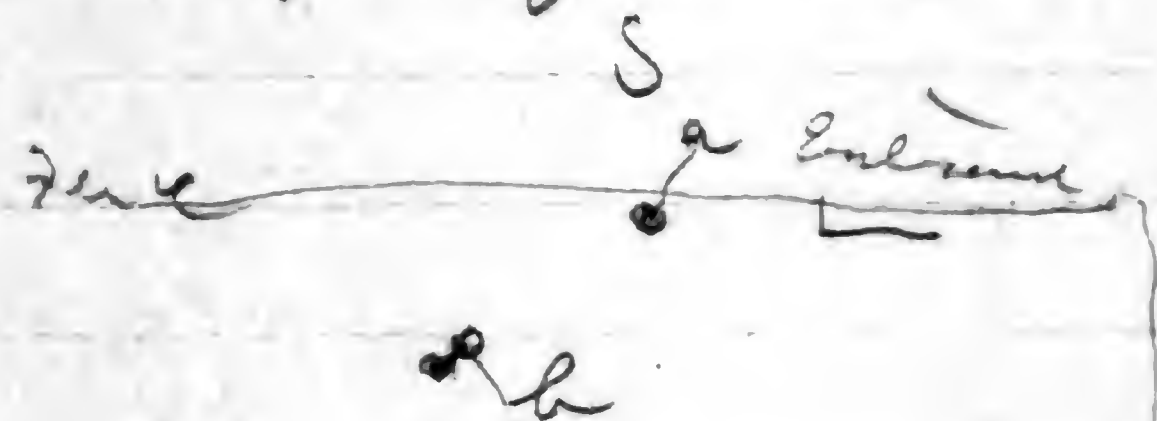


Homestead, N. May 19/1917

Left for Homestead at 7⁴⁵ am,
with 14 students

Went to pond & found algae
abundant.

Took fls. of oak - near pond.



a = *Q. velutina*

b = *Q. rubra*

n

(c) Went to gate on N. side pasture
opp. station - 1st double oak W.
of gate (N. of road) has large
cups - *Q. velutina*
marked (C.)

Upland woods
~~white oak~~
Q. velutina
Q. rubra
Q. macrocarpa
~~Carya~~
White Hickory
Q. alba
~~Iris~~
Basswood,
~~elm~~
Red Elm
Prunus virginiana
Viburnum lentum
Ribes gracile
~~Alnus~~
elm
Populus tremuloides
Prunus americana
Cornus paniculata
~~Corylus~~
~~Quercus~~
~~Rubus~~
Blackberry
Rosa blanda
Vitis vulpina
Prunus virginiana
Pedicularis virginiana
Rubus occidentalis
Crataegus americana
Cladonia

Scleritis
Honey Locust
~~Pyrus~~
White Cherry
Crataegus mollis
~~with~~ *Ribes cynosbati*
Populus grandidentata
Ostrya virginica
Eriogonum
~~Betula~~
Black Birch,
Salix
amygdala
longifolia
~~Juniper~~
Sourwood
~~Carya~~
Hickory

Cornus
Prunus
Rubus

Sandy soil - NE. of House

~~Carex flaccida~~
Ranunculus fascicularis
Salix humilis
Oxalis stricta
Hesperis matronalis
~~Potentilla canadensis~~
Viola pedata
Hypoxis hirsuta
~~Antennaria plantaginifolia~~
Achillea millefolium
~~Cornus umbellata~~
~~Thymus virginicus~~
~~Thymus~~
Kalmia latifolia
Viola (pavilionum)
Lithospermum canescens
Tradescantia (reflexa)
Antennaria canadensis
Pinnella vulgaris
Carex pensylvanica
~~Achillea~~
Hesperis
Panicum tenuifolium

Panicum virgatum
Eryngium yuccifolium
Ranunculus abortivus
Fragaria virginiana
Rumex crispus
Helianthus annuus
Antennaria plantaginifolia
Panicum Scribnerianum
Lactuca
Poa compressa
Antennaria ^{neglecta}
~~Potentilla canadensis~~
Andropogon scoparius
Solidago rigida
Lobelia inflata
Polytrichum commune
Rudbeckia hirta
Lobelia inflata
Anemone cylindrica
Ruellia strepera
Solidago nemoralis
Comandra umbellata
Thalictrum
Rubus occidentalis

~~Panicum virginicum~~
~~Eragrostis virginica~~

My prairie Prof. C. C. ...
was very poor

A few

Viola pedata

Lithospermum can.

Sisyrinchium

Gizocarpus

Antennaria racemosa

Ranunculus fascicularis

Carduus hirsutus

Besseyia bistrata

Many flowers on top

Very few flowers

Along road - Prairie

Salix trix

Doxyastrum nutan

Pycnanthemum flexuosum

Cirsium tridentatum

Panicum virginicum

Antennaria plantaginifolia

Solidago rigida

Andropogon scoparius

Carex fluminea

Momordica

Lepachys pinnata

Everything is broken

Only a few *Cypripedium*

were there. *Geranium*

scarce.

C. lyata in prime condition

The prairie N. of river is
singularly few flowers.

This whole season
has been slow. It
has been cool.

I found *Struthiopteris*
& my *Equisetum* along
road S. of Dutch Lake.

I was surprised to
find the shore banks
W. of the bridge very
dry. *Baccharis* &
Minimus were in fine
fruit & abundant,
but the plants were
shrivelled.

Dicentra was in full
fruit with black seeds.
Sentaria was just out
of flower.

Monarda, *Geranium*,
Anemone, *Anemone*,
Urtica, *Polemonium*,
Cypripedium, *Carliphyllum*,

were in flower in the ^{replac} woods

In the upland openings were
following in flower:

Oxalis violacea

Lithospermum

Comandra (in bud)

Carex pennsylvanica

Viola pedata

Park - May 24-1917

Beginning at SW. cor. of Park

Quercus alba

^{Large}
White Hickory

Quercus velutina

^{Juglans}
Black Walnut

Quercus rubra

^{Ulmus}
Ash Elm

Ribes gracile

Prunella virginica

Sambucus canadensis

Quercus macrocarpa

Prunus virginiana

^{Fraxinus}
Green Ash

Lilium am.

Prunus serotina

^{Acer rubrum}
Hard Maple

Populus tremuloides

Ulmus fulva

Crataegus marshallii

Carya amara

(*Prunus strobus*)

Coronaria parviflora

Corylus americana

Crataegus mollis

Upper bank

Quercus macrocarpa

Q. rubra

Crataegus marshallii

" *mollis*

Q. velutina

Prunus virginiana

^{Ulmus}
Ash Elm

^{Ulmus}
Red Elm

Coronaria parviflora

Prunella virginica

^{Gladiolus}
Honey Locust

^{Fraxinus}
Green Ash

^{Betula}
Black Birch

Carya amara

Vitis vulpina

Smilax hispida

Prunus serotina

^{Juglans}
Black Walnut

Lilium am.

Crataegus macrocarpa

Prunus virginiana

Lowest bottom

^{yellow}
Juglans nigra
elm

Vitis vulpina
^{Fraxinus}
elm ash

Betula
black Birch

Salix nigra

amygdaloides

Crataegus mollis

^{acer}
Bog Elder

Sambucus canadensis

Crataegus Marylandica

^{small}
Prunus americana

Q. macrocarpa

^{carpal}
Prunus

^{glaberrima}
hawthorn

Ribes gracile

Salix longifolia

^{acer}
Maple

Platanus occidentalis

^{celtis}
hackberry

^{salix}
Picea

^{populus}
Corylus

(white bark on bark)

Brighton, Mass. by Oshoby
May 25. 1917

Left Iowa City at
10³⁰ AM, went via Dillon &
Muscatine. Train stopped
at Brighton.

Learned that large
groves still NW. of
Brighton, along
Shunk, undisturbed.
Delivered address on

"Patriotism and the School."
There were 12 graduates,
6 boys & 6 girls.

4 of the boys, soldiers,
left at 10 for
Marion City. Rained
all evening.

Took sleeper at
Oshkosh.

May 26, 1917.

Reached Marion City at 5 AM.
After breakfast Joe went with

me to Big House. On
W. side on return located
vabs:

u
|
S
Pine oaks
Shunk
& oak

Black oak

Marion City

On open places, E. side found
in flower or fruit:

Lithospermum longifolium
canescens

Viburnum acerifolium

Ranunculus fascicularis

Lysichiton

Androsace fr

Castilleja sessiliflora

Draba caroliniana fr

Poa compressa

Anemone patens var. fr

Anemone oblongifolia (?) fr

Ribes gracile

Prunus virginiana - on rocky banks

Agrostis - on rocks

Quercus macrocarpa

" *"ellipsoidalis"* ?

(Common to trees on E. side)

Asteragalus caryocarpus

Crataegus mollis

Anemone caroliniana

Comandra umbellata

Oxalis violacea

In swamp

Caltha palustris

Buckbean

Viola

Salix discolor fr.

"

"

"

"

In woods E. side,

Urtica

Viola pubescens

Polygonum

Quercus

"

more rocky
ellipsoidalis

On open places above
cliff - W. side.

Asteragalus caryocarpus

Anemone patens, var. fr.

Salix humilis fr.

Amorpha oblongifolia much

Returned at 11 AM.
after dinner took
train (late) at 2:00 PM.
for Spirit Lake via
Spencer.

May 27, 1917 ~~Sund~~

Left at 6¹² am & drove
to Lab.

At first hillside S. of turn
W. of Edwards farm
a lot of *Ranunculus*
multifidus.

Pedicularis

Astragalus caryocarpus

Castilleja nivalis

Viola pedunculata

Comandra umbellata

Aithya americana

all fine.

At. Lab.

Dormitory O.K.

Two ports at W. side back

Pier in good shape - 1 pile on
N. side pulled up some.

Boathouse O.K.

Steps to pier O.K.

Roof on ice house.

10 ft. x 12 = 120 sq ft. of
roofing.

Mr. Livingston hauled the ice
& door jammed out (pulled out)

Gates N & S. kept open much
stock comes in.

Mr. Livingston suggests step
put in.

Pump in fair shape.

Sawmills 2 ice spade.

Rake 2 shovels

Axle 1 shovel

Crowbar - 1 pickaxe

Sledge hammer. Post hole digger

Roof evidently leaks
badly on S. side, entrance
lab.

2 dredges - 2 pole handle

Mrs. Livingston's things

20-25 posts.

Cash - N. side.

Roof on Mrs. corner over
Zetor's lab. cleared (open
cracks)

Hoteles & room.

3 packages of ~~exam~~ paper,
1000 napkins

Alarm clock

Ways & red light

Alcohol a couple of gallons?
& bottles

Also, also 4 bottles
Sodium Bisulph

Cyanide of Pot. a lot

Chromic acid a lot

Kerosene can in my old shed

Small lot (4 bottles) of Formic

A couple of gallons in can
Formalin - recent filtering
Box of crayon - few
colored crayons - short
box

Key to office above door

Piece of roofing 3 or 4 ft long
snipped off on W. end
of N. side of lab.

Ponds all full. Rains
of past two days are
said to have raised
lakes 9 in. deep!

Found little fern *Andropogon*
Yitla pedatifida, *Andropogon*
Agropyrum, *Pedicularis*,
Lithospermum canescens &
much *Astragalus*
caryocarpus in flower
on trip
around lower end of
W. Lake.

Took fls. of my Red Oak
4 at Arnold's Park.

Reached Arnold's Park
at 2³⁰. In woods
much *Phlox divaricata*
& some *Geranium*
maculatum.

Reached Spirit Lake
at 3 P.M. & left
at 4¹⁵ P.M.

N. of West Bend very
much *Pedicularis*
canescens along RR.

Add to Okoboji list:

Cotton grass

Ranunculus multipetalus

Big rock (?)

Changes in road list

Andromeda } usually n
Orbe } sand

Wells - plates -

1. Lake beach & river bars
2. Harrison's sand dunes
3. " " "
4. Big mound
5. "

Okoboji - June 7, 1917

Left Iowa City at 9³⁰ PM
with Folda. Failed to get
berth & sat up in chair
car. Awakened often by a
bundle of chattering women and
a poor sick baby.

Friday June 8 - 1917

Day fine.
Just beyond West Bend I
saw the low

Baptisia bracteata
in flower.

Drove from Spirit Lake
around head of W. Okoboji.

Found *Lepus minor* in
swamp at Edwards.

On dry knob E. of Methodist
Tabernacle found:

<i>Oxalis violacea</i>	<i>Sisyrinchium</i>
<i>Vicia pedatifida</i>	
<i>Lebanon cuneata</i>	
" <i>longipetala</i>	

In front of turn,
W. of Edwards Rannoch
multifidum was still plentiful.
On prairie A. saw fine
Castilleja nivalis Oxalis violacea
Viola pedatifida Astragalus caryocarpus
Pedicularis canadensis.

On wet prairie - Cyrtanthus by
Viola -
Oxalis violacea
Senecio -
Hypoxis.

Cyrtanthus in fl.
Eriophorum along stream flowing.

Reached the Lab. about
noon.

Afternoon looked over
repairs & then went
to Elk Creek woods
collected a few
prairie plants in the

cleared "streets".
In woods few flowers.
Osmorhiza
Hydrophyllum
Oxalis divaricata
Cyrtanthus - fine record

went to small pond & found
a few plants.
Bunch water, lake
higher than ever.
Slept in cottage.

June 9, 1917

Drove to Montgomery.
Orealis violacea exceedingly
abundant in flower.

Drove back in round-
about way & mapped
ground.

Returned at 1²⁰ PM.

Fed horses & drove
west.

At 3 PM. started for the
Little River via E. & W. road
north of Lab. (past school)

Had accident with horse &
just got a little *Urtica*
in fruit, - then drove to Lusk.

Pedicularis canadensis

Lithospermum canescens

Both very abundant, as
was *Astragalus caryocarpus*.

Spent evening in changing
drivers.

June 10, 1917

Spent morning in looking
over repairs, etc., & in changing
drivers.

Left at about 10 AM &
drove around lower end of
lake. Did some mapping
en route.

Found lots of *Wolffia* & an
Alga in Green Slough, right
along road.

Big Buffaloes were abundant
here. The slough was very
full.

Lithospermum ^{argenteum} canescens was
abundant. On frame S-
of mail box

also saw some *Viola pedatifida*,
Zizia aurea (in fl.), *Astragalus*,
caryocarpus, lovely *Pedicularis*
canadensis very common.

In flower along RR
W. of Spirit Lake, high prairie

Viola pedatifida
Lithospermum canescens
Sisyrinchium
Lithospermum ^{abundant} *viridula*
Poa pratensis RR & pr.
Anemone patens fr.
Vicia americana
Lathyrus venosus - fr.
Antennaria ^{neg.} *meibomia* (?) fr.
Comandra ~~subulata~~
Hieracium *lucidum*
Podagracea canadensis
Senecio phillipsii
Anemone canescens } low
Erigeron philadelphicus } - also high
Thalictrum dasycarpum }
Onoclea sensibilis
Danthonia (?) (grass)
Carex *flacca*
Pyrola — RR

Poa compressa
Sisyrinchium canescens RR
Galium boreale fr.
Ellisia *mydata* RR
Erigeron *acris*
Oxybaphus *strictus* RR
Scrophularia *repens* RR
Harissa *repens* RR
Campanula RR
Tradescantia ^{virginica} *flavescens* RR
Caprilla *borealis* RR
Sisyrinchium albidum RR

June 16, 1917 - Mason City
Left for Cedar Rapids
at 10³⁰ PM.

Mason City - Expenses -

June 16, 1917 -
R.R. to Cedar Rapids .00
R.R. to Mason City 2.83
Sleeping 1.50

June 17, 1917

Took C & M for Mason City.
Cold yesterday & today

June 18, 1917

Morning bright.
Near Mason City on prairie
Phlox pilosa in at least, &
many are white.
Lithospermum canescens passing out.
Hypericum hispidum - good.
Senecio flatteria? "

In upland woods W. of Slough
mostly *Q. ellipsoides*?

& *Q. macrocarpa* (rare)

Also *Opulus tremuloides*

Crab, Red Oak, Choke

Cherry, wild Plum, Wild Cherry,

Rosa, Hazelnut, Hazel

collected a bunch of

plants including

Polypodium & *Cypripedium*

On the edge of the Slough

Ulmus americana Red Cedar

Q. macrocarpa Red Oak

Q. ellipsoides 1200 ft

Wild Black Cherry, Choke Cherry

Staphylea trifolia, *Cornus alternifolia*

Green Ash, *Fraxinus americana*

Ribes cynosbati, *Ribes floridum*

Ribes glabrum

Lonicera canadensis

On rocky slopes, W. side

Clematis, *Anemone*

Cryptogramma, *Heuchera*

Cystopteris bulbifera

On wooded rocky bank, W. side

Agarum

Phlox divaricata

Arisaema 3-phyllum

Ribes floridum

On rocky

Cardamine hirsuta

Stellaria longifolia

Carex

Equisetum

Eriophorum (gracile? small one)

Carex

Rocky bank - E. side -
 Pseudotsuga
 Birch
 Black Cherry
 Ash
 Hazel
 Sumac
 Red Elm
 Cornus paniculata
 Box Elder
 Yellow Lonicera
 Wild Plum
 Quercus ellipsoides
 Prunus pennsylvanica
 Viburnum dentatum
 Crataegus commersonii (bud)
 Amelanchier (small)
 Crataegus mollis (thorn)
 Crab.
 Red Bladder
 Ribes fluminense
 Ceanothus scandens
 Basswood
 Red Symplocarpus
 Cottonwood (1)

1917
June, 23 - street

elm
Am. elm
elm
Red elm
acer
Hard maple
sugar
Black Walnut
acer
Soft maple
Lilia
Magnolia
Populus
Cottonwood
Aster
Am. Birch
Gleditsia
Honey Locust
10 Shell bark
Horn-chestnut
Catalpa (fig)
Eu. Basswood
Box Elder
15 Hackberry
Black Locust
Blue Spruce
Am. Cherry
Green Ash
20 Chestnut
White Mulberry
Juniper

Asiatic Pine
Am. Vetch
25 White Birch
Sycamore
Catalpa
Red Cedar
White Oak
30 Red Oak
Eu. Larch
Black Birch
White Pine
Am. Birch
35 Wild Olive
Mex. Ash
Chinese Elm
White Spruce
Norway Spruce
40 American Pine
Red-bud
Crab
Peach
Prostrate Juniper
45 Tamarack

Wilton & Moscow
June 28, 1917

Sand flora at Moscow.

Asclepias incarnata

Cyperus Schweartzii

Epilobium apertum

Marrubium cicutula

Plantago aristata

Veronica stricta

Crucifera

Oxalis stricta

Hordeum jubatum

(L. 1000)

Achillea millefolium

Sisymbrium album

Rabaria glauca

Asclepias verticillata (L.)

Hieracium hirsutum

Panicum Scribnerianum

Festuca ovina

Monarda punctata

Eriogonum racemosum

Sporobolus vaginatus (L.)

Silene acaulis

Leptocarpus capitatus (L.)

Erigeron canadensis
Equisetum (pin)
20 Agrostis sp.
Habenaria
Hordeum jubatum
Capsella
Plantago virginica
Juniperus
Artemisia ludoviciana
Clematis virginiana
Euphorbia corollata
Verbena stricta
36 Carex acutiformis
Sedum spectabile
Thalictrum flavum
Geranium carolinianum
P. Thymus sp.
Ceanothus americanus
Rhus canadensis
Potentilla canadensis
Mullein (refuse)
Equisetum (refuse)
Lithospermum

Asplenium platyneuron
~~Andropogon~~
Carex grandis C.
50 Bromelia floridana (cutting)
Equisetum
Xanthoxylum
Aporosa (brown)
Euphorbia heterophylla (brown)
55 Polygonum convolvulus
Euphorbia corollata
Thalictrum flavum
Convolvulus sepium
Poa compressa
60 Asclepias tuberosa
P. amplexi
P. amplexi
Ambrosia psilostachya (lf)
Carex
Lactuca scariola
65. Lactuca
Ambrosia trifida
Equisetum laevigatum
Eleusine indica
Cannabis sativa (lf)
70. A. v. hirsuta

71 - *Pentstemon* *gracilis*
Acer platanoides *seboroides*
Helianthus *-*
Oenothera *laevigata* *ls*
75 *Viola*
Verbascum
Mullein
Kochia *cristata*
Eragrostis pectinacea *var*
Specularia perfoliata

Homestead - July 1917

went through woods N.

Brickellia prairie
Solidago canadensis *of*
Helianthus giganteus *lf*
Corynephorus trisetus *lf*
Rosa pratincola *fl*
Liatris pycnostachya *sw.*
Carex festucacea *fr.*
Aster multiflorus *lf*
Solidago rigida *lf*
Aquilegia canadensis *fl*
Pycnanthemum flexuosum *sw.*
Thalictrum *reflexa* *(monte)*
Potentilla canadensis *- lf*
Euphorbia corollata *lf*
Lobelia spicata *fl*

14 Achillea millefolium fl.
 Bromus virginicus fl.
 Antennaria plantaginifolia fl.
 Panicum - (fine) fl.
 Junonia tenax fr.
 Baptisia (mud) fl.
 Lespedeza capitata lf.
 Rudbeckia subtorta lf.
 " hirta fl.
 Parthenium integrifolium fl.
 26 Solanum integrifolium lf.

CHARG.

Amaranthus Javanicus
 Lespedeza capitata
 Euphorbia corollata
 Phytolacca ^{virg} purpurea
 Eryngium yuccifolium
 Erigeron annuus
 Rudbeckia subtorta
 " hirta
 Desmodium illinoense
 10 Koeleria cristata
 Rosa pratincola
 Viola pedunculata
 Panicum berlandieri
 Poa pratensis
 Prandium bracteatum
 Achillea
 Helianthus annuus
 Anaphalis margaritacea
 Carex festucacea
 20 Lycopodium flexuosum
 Potentilla canadensis
 Composita repens
 Lobelia spicata
 25 Senecio jacobina

26 - *Anemone nemorosa*

Gentiana

Anemone nemorosa

Artemisia ludoviciana

30 - *Asclepias syriaca*

Erigeron annuus

Pentstemon digitalis

Asclepias tuberosa

Asclepias tuberosa

35 - *Lupinus perennis*

Elgum canadense

Helianthus scaberrimus

Baptisia bracteata (L.)

Delphinium ajacis

40 - *Asclepias verticillata*

Thalictrum flavum

Solidago canadensis

Hypericum canadense

Oxalis juliflora

45 - *Rubus multiflorus*

Leonurus canadensis

Rudbeckia hirta

Along road

Rubus phylladelphicus

Staph. sp.

Erigeron annuus

Rudbeckia hirta

Achillea

Euphorbia corollata

Liatris pycnostachya

Rumex crispus

Kuhnia crispa

Artemisia canadensis (?)

Rumex crispus

Helianthus scaberrimus

Tridax procumbens

Hamamelis virginica

50 - *Oxalis juliflora*

Monarda mollis

Salix humilis

Phlox pilosa

Delphinium ajacis

Anemone nemorosa

Lupinus perennis

Lespedeza capitata

55 - *Solidago nemoralis* var.

24 *Pop. fruticosa*
Asclepias tuberosa
Antennaria plantaginifolia
Anemone cylindrica
Cnicus palustris
Campanula trachelium

30 *Campanula medium*
Solidago nemoralis
Pteris aquilina
Hardyia palustris
Carex flacca

35 *Crucifera triflora*
Achillea millefolium
Brassica (var.)
Potentilla canadensis

Lepachys pinnata
 40 *Rubus odoratus*
Lobelia spicata
Parthenium integrifolium
Erigeron annuus
Eragrostis ciliaris

45 *Asclepias syriaca*
Lacina lutea
Pepisanus alba

48 *Sparganium angustifolium*
Salix humilis
Linum catharticum

Eldora, Ia to Standard Rock

July 31, 1917

Bluffs (winds) near center

Hard Maple, very com

~~Fraxinus~~

~~Black Ash~~

~~White Birch~~

~~Carpinus (luna)~~

~~Alnus~~

~~Ros. chin~~

~~Garrya~~

~~Prunus~~

~~Douglas~~

~~Prunus lora~~

~~Ostrya~~

(In deep woods almost no)

~~Lichen on trees~~

~~Juglans~~

~~Walnut (luna)~~

~~Quercus~~

~~W. Oak~~

~~Gaultheria~~

~~Black Ash~~

~~Sambucus canad~~

~~Elder very~~

~~Crataegus (?) see lora~~

~~Viburnum~~

~~A. chin f low down~~

~~Acer~~

~~Prun. lora~~

~~Julia~~

~~Passiflora~~

~~Cornus alternifolia~~

~~Ribes cynosbati~~

~~Prunus serotina~~

Rubus occidentalis } along
Rham. laloni } road

The low part above bridge
(w. side) have many young
Polyg. frondosa & some
Aster multiflorus clinging to
broad leaved plants like
Rubus occidentalis, Eupatorium
maculatum, Aster dumosus,
Helianthus (narrow leaved)
Phytolacca on Red Elm thick
Salix amygdaloides (low)
Soft maple (low)
Green ash (low)
Populus tremuloides

ED NO

This is 4th hot day, & plants
are beginning to show it.
In deeper woods - winter plants
about now -
^{Lappula}
Nette (low)
Campanula americana
Silphium perfoliatum
Heracleum
Helianthus (narrow leaved)

Chenopodium hybridum
Impatiens (pale)

Eupatorium verticillatum
all leaves look flabby,
especially in open.
Day is clear, hot & windy
Heracleum is very common
in deep woods on bottomland just
at foot of slope. In fruit.

Ranunculus
Vitis vulpina
Salix nigra (low)

N. of bridge there is an
irregular gravelly terrace
which runs back N. at
least to turn in road.

The bottom is flat for a
short distance & then terrace
(with gravel pit at edge) rises
abruptly. Two houses
are in it nearly ruin.

Everything on open part of
this terrace is burnt
dry. There is still

some timber, & evidently
most of it (if not all)
was timbered.

Below bridge bluffs
are rough, almost cliffs
with a few white pine
worth saving for peak
all low in open trees
& all, some in low hills.

Bluffs above bridge
partly (mostly) cleared.

The sloping bluffs on E.
side of terrace (see map)
are covered with mostly
light boulders (downy)
All these slopes are now
brown.

N.W. wind has been
blowing, this is fourth
day.

Corn low, rolled up &
cut. sunflowers withered.

Actinidia & other Xerophytes

on open terrace are dead &
dying & grass is almost
all brown.

Bowdoin on the slopes
are very numerous, but
lichens very few.

(See spec.)

A few Verbena stricta in
flower (winter & winter)
are the only plants that
seem to hold out on these
slopes.

This is now mostly blue grass
pasture. Now dead.

On top of hill N. are a
good many hard maples.
Those on edge have leaves
on S (+ slo) scorched, those
on N better.
Trees deeper in woods are
green.

At Jumbo took a lot
of plants, those not
taken:

Buttercup
White bird

On Oak Knob above
firm cliffs:

Asclepias
Rudbeckia hirta
Lepidium albidum
Aster multiflorus
Aster laevis
Verbena stricta
Asclepias speciosa
Monarda mollis
Verbena latifolia
Verbena
Erigeron ramosus

Asclepias
Aster
Hedera

Clear view
Red Oak
Crataegus mollis

Asclepias speciosa
Asclepias millefolium
Aster multiflorus
Aster laevis
Asclepias speciosa
Crataegus mollis (no spec.)
Erigeron ramosus
Hedera hispida
Lepidium albidum
Monarda mollis
Opalis stricta
Quercus rubra, (no spec.)
Rudbeckia hirta
Verbena stricta
Verbena latifolia
Verbena stricta

Allamakee Co. - Aug. 11-1917

Left Saturday morning at 6¹⁵ & went to Postville. Reached it about 12¹⁵ & found that Mr. Orr was delayed by accident. Left Postville at 2⁴⁵ P.M. & followed the auto road (West Union & Wagon Road) through Post & Laddow townships.

Examined cuts along road. Cut 1 is between nos. 20 & 21, Post Twp. It is a ^{more} long cut over a small, sloping down to N. Cut 1 - Low - about 7 ft cut on swell.

Nearly all yellow loam. Change in about 1 ft.

Took samples 1 - 3 & 8 ft. below top.

A little farther N. the gray loam loam, very gray with few large tubules of iron, is much sharper.

Set off - very a little rusty transition.

Uppermost part is dark brown & lobular.

Thin cut in 600-700 ft. long. Still farther N. on slope down, ferritic & bouldery. Bright show below.

Loam quite sharp. Here cut about 8 ft deep & about 2 c. ferritic & sharp.

The gray loam is likely to be less abundant.

Some of the boulders are striated. Dark boulders & some very quartz.

The gray loam runs out & yellow becomes thinner north.

See dark flinty boulder still farther down. This Ft. Dickinson chert is exposed.

1. The U.S. of all the
 2. 1. The U.S. of all the
 3. 1. The U.S. of all the

Chas. W. Richardson

Principles

Admiral

Hydrolysis: NaOH

Pruden church

Acacia

1890

Don't like it

Richard L. L. L.

100

Heliconia calypso

Rustleria carinata

(over)

Rubus occidentalis

V. incallata?

Brown (smooth)

Extruder

Phalaena

English Yellow Wax

Co. 1st Regt. 1st Div.

Pucela

Anterior - 1 and 2

[Faint handwritten notes at the bottom of the page]

Cebastans
 Impatiens fulva
 Mamm
 Mistletoe (Siphylle)
 (Dendroica laevis)
 Agropyron
 Populus tremuloides
 Walnut
 (Cockspur)
 Prunella
 Prunella

Cut 2 (on map) shows
 a deep (4-5 ft) fissure
 in the red loess -
 like clay - redder below
 + hard + jointed
~~some of it~~, somewhat
 (see spec)

Easternmost part of
 drift.

Cut 3 (on map & sample)
 is about 6 ft high
 Shows deeper rock than
 (rock fragments & a sort of
 clay - yellowish) & on it
 a very red layer which
 grades up into yellowish
 stuff, but still not like
 loess.

Took sample 3 ft
 below top.

Took another sample
 1 ft from base in
 dark layer.

This country between
 Portville & Waukon is
 rolling (not excessively) (yellowish)
 excepting along the river
 where it is rough, with
 rocky ledges.

Ludlow & Jefferson Twp
 & Union Prairie North, have
 many sink-holes. Each

of them that I noticed
shows a bunch of trees
or brush. According
to Mr. Orr Lindlow
Port is the largest
number.

Mr. Orr says the loess
on the uplands has
no fossils, and that it
is in thickness from
2 or 3 ft. to 15 or 20.
This may include stuff
which is not loess.

It appears to me that
most of this upland stuff
is too red, too hard, &
too "columnar" or jointed, for
loess. Is most of this
decomposed old drift?
Or less likely, gneiss?

Is this what has become
of the old drift?

The absence of fossils

from most of this loess
is probably due to the
fact that the upland
woods in this part have
few mounds. After some
work in the undisturbed
woods (never cut and
never pastured) north
of Portville (3 mi. N.) I

found the following:

Polygala alabamica - few

Pyramula alternata - few, dec.

Helicodiscus parallelus - several.

Carychium - 3.

Circumaria concava - 2.

Why are snails almost
absent in these otherwise
promising woods?

Mr. Orr says the

Beaver/Hazel occurs

near Yellow river in Port²wp.

& there is a clump of
native Balsam Fir on
S. side of Yellow river in

Aug. 11, 1917
There are 25 to 50 trees, &
the only location in the
county. Only on Galena-
Frontier limestone. (This

is same as Bluffton)
The Beaver Dam is in
sec. 34 (near road in SW part)
sec. 34-97-6 (Keweenaw)

They are also W. of the
Walton Bluff.

The juniper grows only on
Onondaga limestone.

See pink-like area
marked on map by Mr. Orr.

Aug. 12, 1917

Rained all forenoon.
Started out after dinner
on red road to Lansing, but
turned N. on smaller red
road through center of
French Creek Twp.

Stopped in little old
Cemetery 2 mi. N. of Waukegan,
in N. part of sec. 19, and
collected quite a number
of prairie plants,
with them grew short
Osmunda claytonia &
Asplenium filix-foemina
(see spec. of all)

This is a bit of native
upland prairie.

Mr. Orr says *Clintonia philadelphica*
grows in the cemetery.

In the S. part of sec. 33
French Cr. Twp. The road runs
along ridge, & west of it there
is a rocky ledge, with

H. Peter sandstone exposures,
this I called "Juniper bluff".
Juniper communis & possibly
J. sabina grow here.

Also collected several prairie
plants on bare place above
rock ledges (see spec.) & also
lichen & mosses on the sandstone.
In the north part of sec. 28
of same Twp., on E. side of
road, high up, were
low exposures of H. Peter's
sandstone, with many worms
& lichens. (see spec.)
Poa compressa is also very
common above the low
ledges. (see spec.)

Rained more & more.

In the north west 1/4 of
sec. 2 we descended a
long hill to river
valley. (Upper Iowa)
The woods here are dense.

Quite low down, on a sort
of irregular terrace, the
road cuts into fossiliferous
loess. (Numbers are ~~revised~~ ^{not up}
order in which I studied
them.)

(No) This is on N.W. side of
road where it joins other
road at foot of hill.

The loess is yellow & has
shells scattered through it,
lime nodules, some rather
large & many small ones,
are scattered through it.

See sample of loess &
shells. Sample taken
from fossiliferous part about
5 ft. from base, & 3 or 4 ft
from top.

(A) A little higher up,
the road ascending gradually
(possibly 10 or 15 ft²). A bank
along N.W. side of road.
Fossils scattered through to

at least 6 or 7 ft. above
base. Boulders are on
bank here, probably
from below loss in
graveling. 2 or 3 boulders
were noticed.

Collected shells & took
sample.

(C) - Still higher, - 5 or
6 ft. higher. Another
part of same bank
see shells & sample

(d) - still higher, - may
be 5 or 6 ft. see
shells & sample of
clay.

This loss is yellow.

Cuts b, c, d, show
beaver nodules mostly
quite small.

Fossils were most
abundant at (c).

Occasional blue-gray
spots or lines occur
in lower part.

After we crossed river
in N. part of sec 35,
E. of road, I collected
a number of prairie
plants on base hillside.
This region is very rugged -
"the Switzerland of Iowa".
Fine all the way to

New Albin.

There are numerous
terraces, with many
Indian skeletons. Saw
some

About $\frac{1}{2}$ way to New Albin
we saw in sand bank
several Indian skulls
& skeletons.

Collected Mammals, etc.
here. Much Mammal
fossils where sandy.

Put up at Mrs. Hart's
at New Albion.
Arranged plants, etc.

Aug. 13¹⁹¹⁷ Monday

Cloudy & wet.

We walked along the
C. & N. P. R.R. Still of
New Albion for nearly
two miles.

Collected prairie plants
along R.R. This is bottom-
land, but a little higher.

A piece of the original
bottom prairie lies just
S. of cut off lake before
you come to ^{upper} New Albion.

2 mi. S. of Albion

It shows *Dactylis*

virgata & *Andropogon*
frustratus dominant, with
the following:

Silphium perfoliatum
Spartina, *Solidago*
monarda, *Helianthus*
Rumex, *Eriogonum*,
Oenothera, *Linum*
Cnicus, *Verbena*
Asclepias syriaca
Rosa blanda, *Cirsium*,
Elymus,

Went to river & on E. side
found that alluvium
had been washed out
in fields & quantities
of shales were exposed.
See two boxes.

Then went to big bench on
E. side, extending almost to
burial place in sec. 20, &

Form a few column
sheets (see spec.)

above burial ground
collected Lichen on rock,
also *Pellaea atropurpurea*.

In burial place they
exhumed this morning other
skeletons & rounded pots,
Each with a clam shell
spoon in it.

Recoxya small birds
particular, *U. alata* -
U. grisea,



They watched
them like this.
Evidently apes.

Upper and Lower Illinois

I climbed up
 took in set of plants
 from lower half & some
 from upper.

Ad. Top - Low Androgen
Sp. dominant - 10
very d. female
int. seasons (not below)

[illegible]

Helianthus (near trees)
Viburnum

Castilleja occidentalis
Lobelia cardinalis (near trees)
Solidago nemoralis - Rapa (H.)
Campanula rotundifolia
Aster laevis, Helianthus
candidus (in trees), Rudbeckia,
Foster's ~~willow~~ ^{willow} ~~willow~~ ^{willow} ~~willow~~ ^{willow}
The bluff is rocky, covered
with about no soil.
True prairie, plants
stunted, extremely
upward.

The forest above is
Basswood, Norway Spruce, Asp.
Hickory, Hazel.

Look photo 3 & 4 looking
back along road from
cross road near Mt. Hope (where
we turned yesterday)

On sec. 38 beyond Mt. Hope
there is low terrace.

Cut 11 is lower one, yellow
with streaks of sand in
lower part. On same

level further back (towards
Mt. Albion) there is sand below
it. Transition is rather abrupt.
Found a few fossils (see list)
+ some nodules.

Cut 2 is 15 ft. higher &
about 20 ft. below top
of terrace. Few fossils
+ also nodules, yellow.
These terraces all along
have been in contact
sand below.

Slopes in part had much
dead hemlock, about $\frac{1}{2}$
way up or a little more.
It is evident that hemlock
recedes as well as advances.
This looked a year or two old.

We drove on to next
bridge above & crossed the
river. The run on W.
side running up hill

is very sandy in lower
part (but running well up)
we had hard work getting
up, & finally broke down
in a hill 12 mi. out from
Waukegan.

Aug 14-1917

Left Waukon by auto at
7 am & reached Portville
at 8:05. Roads bad.

Left at 8:25.

S. of Portville - some
prairie along RR.

To Clermont, not very
promising.

Just below Clermont is
a terrace with sand-pit.

Look this up.

(Was. Lambie's ^{last water tank} etc!)

From below Clermont to
Elgin we follow Turkey
river. This is rocky & a

fair sized stream. Valley
broad. Here & there bluffs

look promising.

Could be worked from
Elgin to best advantage.

Creek valley from Elgin
to Brainard.

There is considerable timber here,
on rather high bluffs.

Near Brainard a lot of
loess (fossils?) just before
we reach depot.

Walk from Brainard to
Elgin, - only 4 miles!

To West Union 6 mi. from
Brainard. Bluffs rough
& timbered along creek.

Valley narrow.

Loess exposure on slope
just before we reach
West Union.

Some loess beyond West
Union, along RR.

Then boulders begin -
from upper Iowa.

Just before reaching
Independence - ^{small} ~~small~~
pines & swamps, before

crossing river, - hence on
side across from station side,
which is some distance away.

Much of RR right of
way is cut over.

Account - Monticello - Sabula

June 12 - Iowa City - Taxi	\$.25
RR to Cedar Rapids	.86
RR to Marion	.18
Lunch, Marion ¹⁰ Lunch ³⁵	.45
Taxi to Monticello	9.50
Lunch phone	.30
June 13 - Dearborn Hotel, Marion	.75
Lunch (breakfast) "	.10
RR Marion to Sabula	2.80
June 14 - RR. to Clinton	.54
" 15 Lafayette Hotel - room	2.50
Taxi -	.25
RR. to Davenport	1.13
Davenport - breakfast, ⁵⁰ dinner ⁷⁰	1.20
RR. to Iowa City	1.75

Pd. by
Dunlap.

June 12 - 1919 - Monticello.
Left Iowa City at 3:40 PM
(1 1/2 hour late). When we
reached North Liberty another
car came down and we
backed off to Oakdale!
This caused me to miss
the C.M. & St.P. at Cedar Rapids.
Took car for Marion and
after much trouble, got
a man to taxi me by taxi
to Monticello, 50 miles,
for \$9.50.

Delivered commencement
address to class of 25.
Mr. L. W. Dunlap, Supt.
Mr. Reed, president of Board.
Saw young Mr. & Mrs. Brainerd.
Also Dr. Wilkinson was here
on way to Anamosa.
Left after 11 & reached
Marion about 1 AM.
Put up at Dearborn Hotel.

June 13. 1919 - Fri. - Sabula.

Left Marion for Sabula

at 5:27 AM. Reached

Sabula at 8:35 AM.

White Rose Chapter 245, O.R.S.

at Sabula, Mrs. Ethel A.

Rebman, Worthy Matron.

(Clinton, no. 65, Miss Bernice Finch.)

Muscataine, June 17, 1919

Left at 2⁴⁷ PM

Taxi ——— .25

RR to Muscati 1.35

June 18 - Breakfast .25

RR to Iowa City 1.35

\$ 3.20

Reached Muscature at
4²⁰ & was met by

Asst E.D. Bradley,
the W. Patron.

Drove out to Country Club
(or golf club?) & had
reception.

At 8³⁰ we opened Chapter,
& it was hot!

Mrs. Crisis called my
attention to letter from Eagle
Brook ^(Cotton) complaining that
daughter-in-law teaching
in Winterset was said

to be candidate for C. S.
 That W. Matron Mrs. Focht
 of Engle Grove wrote a
 derogatory letter to W. Mat.
 Mrs. Hamilton at Winterset,
 which was shown about,
 and which forced Mrs.
 Potter's resignation as a
 teacher in Winterset.

I am to receive news at Colby
 Tuesday, & come to Winterset
 (if necessary) Wednesday.

Left Muscatine June 18, 1919
 at 6 AM

Weeds, Muscatine

Oxyria - small, yellow

Hordeum jubatum

Monarda ^{arvensis}

Bryonia ^{terrestris}

Archim

Lactuca scariola

Iris versicolor - fl. large

Prairie plants -

Muscatine to Summit, E. side.

(This is good prairie - timber type)

Oenothera muricata hairy, yellow, large fl.

Lilium philadelphium (creed) fl.

Tridacena reflexa fl.

Rosa blanda ^{2, hairy} fl.

Eriogonum ramosum fl.

Asclepias speciosa fl.

Rudbeckia hirta fl.

Thalictrum dasycarpum fl.

Stipa spartea fr. & fl.

Vitis vulpina - lf & fr (juv)

Rhus glabra lf

Hordeum jubatum fl.

Corylus americana - lf & br.

Comarostaphyly fl.

Asclepias speciosa fl.

Asclepias speciosa fl.

Asclepias speciosa - br.

Yucca americana fl. & fr white

Parthenium integrifolium fl. comp.

Rodgersia viscaria fl.

Asclepias speciosa fl.

Asclepias speciosa 1 fl. looks

Rosa pratincola fr.

Eriogonum speciosum - bud
Salix humilis lf.
Silphium laciniatum lf. + fr.
Pastinaca sativa - lf. + fr.

Summit to Wilton

- Tradescantia reflexa* fl.
- Thalicttrum dasycarpum* fl.
- Eriogonum speciosum* fl.
- Lilium philadelphica* fl.
- Rosa pratincola* fl.
- Achillea millefolium* fl.
- Stipa spartea* fr.
- Hieracium puberulum* fl.
- Brunneria pallida* fl.
- Koeleria cristata* fl.
- Poa pratensis* fr.
- Carex palmata* lvs
- Silphium laciniatum* lf.
- Rudbeckia hirta* fl.
- Oxycoccus rigens* fl.
- Vitis vulpina* lf.
- Hieracium hirsutum* fl.
- Practina lanceolata* fl.
- Krigeria amplexifolia* fl. (old)
- Lobelia spicata* fl.
- Phlox pilosa* fl.
- Eriogonum speciosum* lvs
- Oxycoccus* ^{variegata} _{large yellow}

- Artemisia ludoviciana* lf.
- Salix humilis* lf.
- Anemone cylindrica* fl.
- Cartagenium integrifolium* fl. (white comp)
- Pastinaca sativa* fl. + fr.

(as above - wet)
 Red clover
 White clover
 White clover

This is really a good
 piece of prairie - especially
 between Wilton & Summit,
 and should be worked.

Weeds at Wilton

Polygonum viviparum fl.
Polygonum campyloides fl.
Trifolium repens fl.
 " *hybridum* fl.
Cynodon dactylon fl.
Hieracium pulchellum fl.
Ranunculus acris fl. & fr.
Urtica dioica fl.
Plantago major fl.
Aster multiflorus fl.
Trifolium pratense fl.
Sisymbrium officinale fl.
Phlox subulata fl.
Verbena officinalis fl.
Achillea millefolium fl.
Ambrosia artemisiifolia fl.
Lupinus albus fl.
Lactuca scariola fl. (seedling)
Euphorbia corollata fl.
Poa pratensis fl. & fr.
Polygonum persicaria fl.
Convolvulus sepium fl.
Rumex crispus fl.

Bromus tectorum fl.
Hordeum jubatum fl.
Sisymbrium altissimum fl.
Achillea millefolium fl.
Agrostis hyemalis fl.
Veronica thapsus fl.

June 18, 1919 Burlington

Left at 2⁴⁷ PM. Reached
Burlington at 6²⁰ PM.

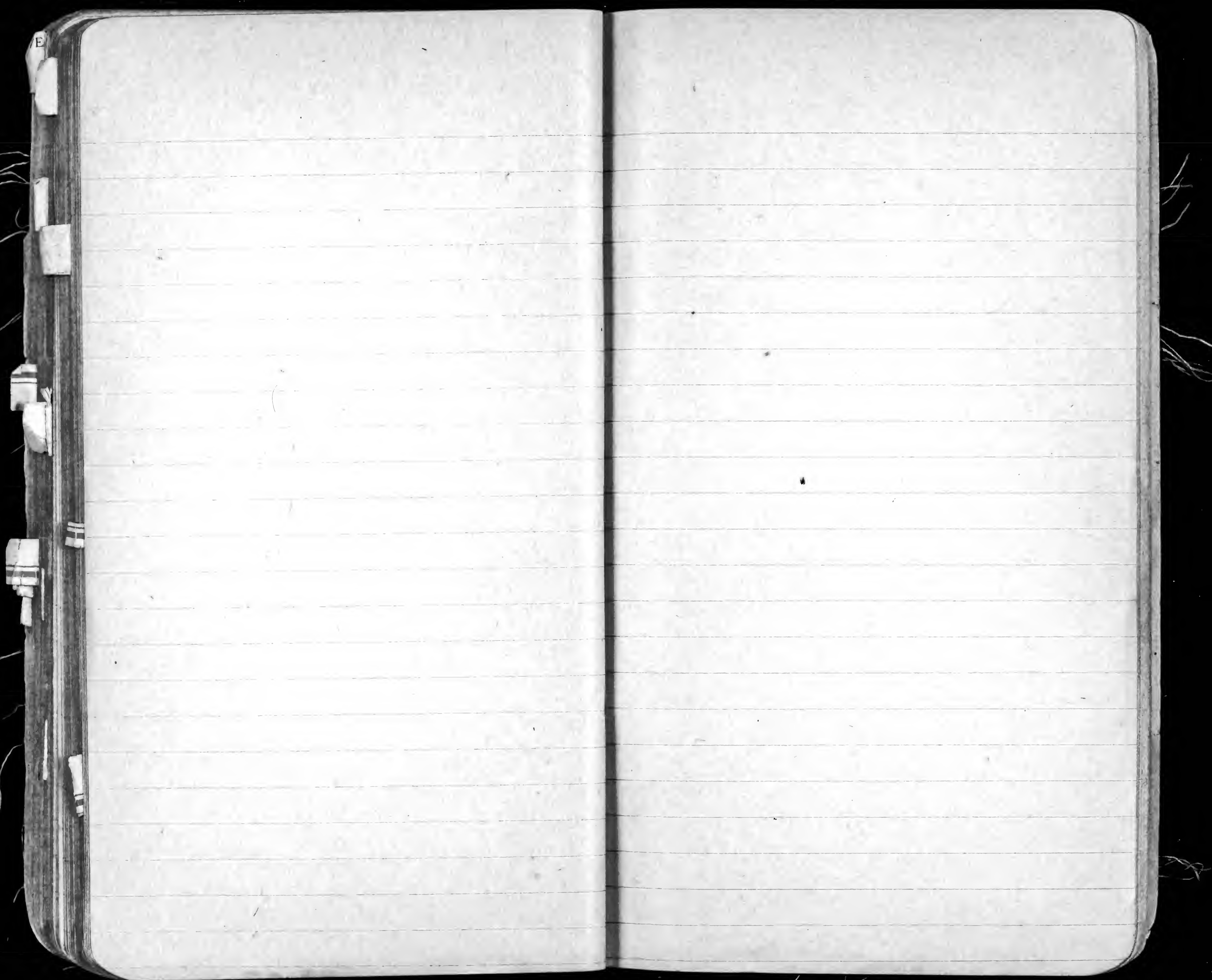
Mrs. Eisenhardt's daughter
met us. Took dinner
with most of town office.

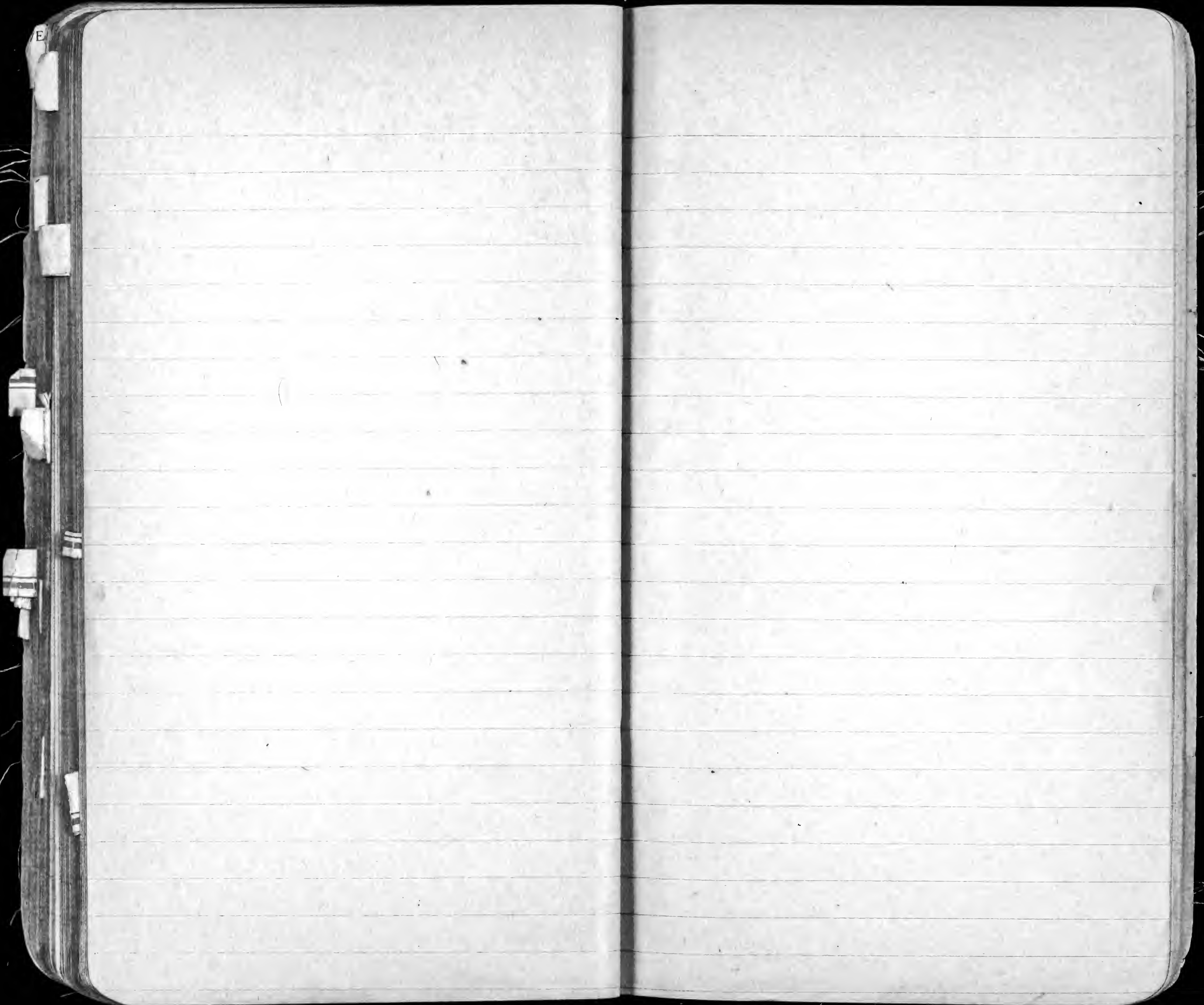
Put on work at night.

1st!!! Slept in Union Hotel

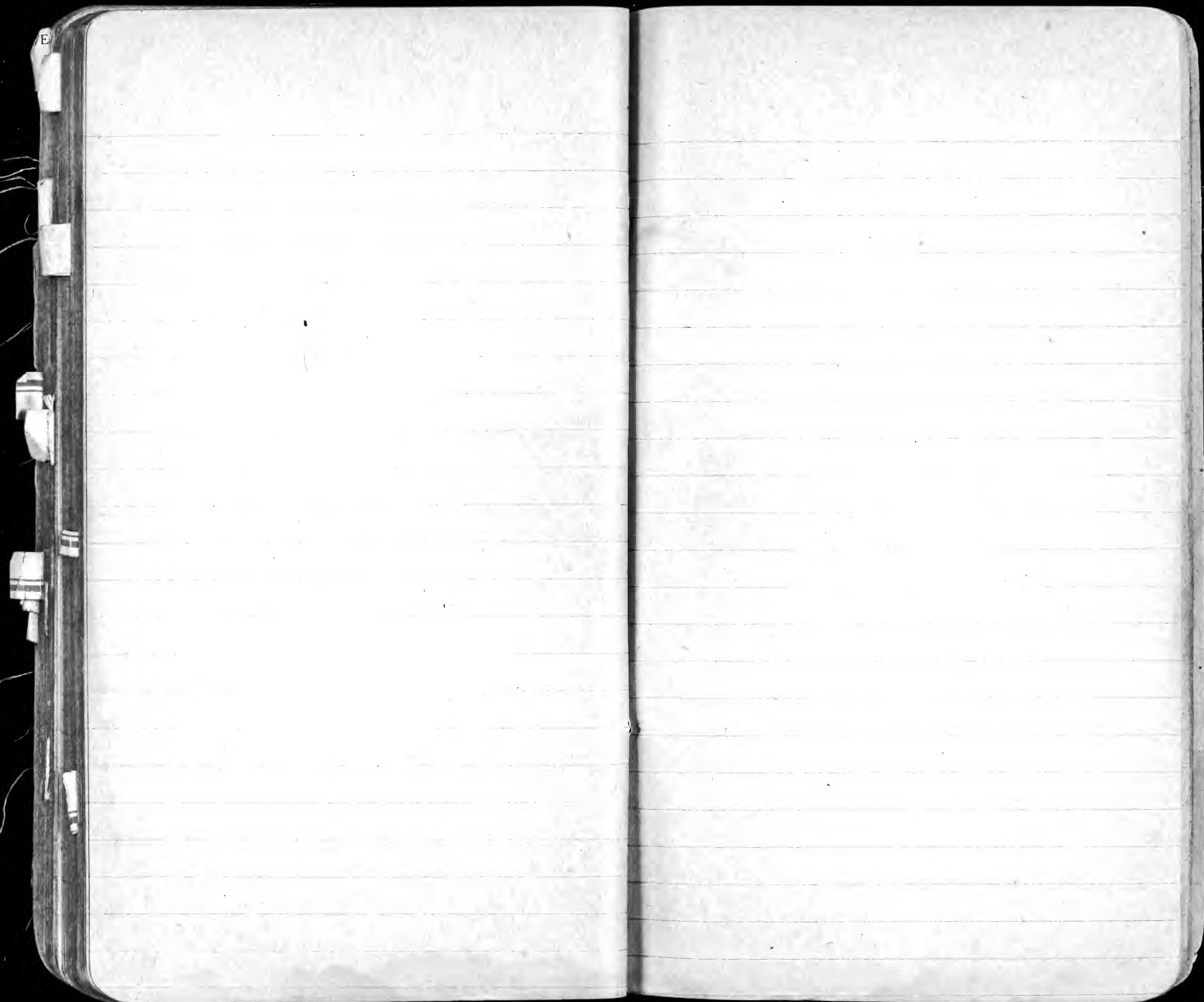
Left at 4⁴⁰ AM. Asked
for water twice at hotel
& got none.

Taxi - Iowa City	.25
RR to Burlington	2.52
Union Hotel - room	.75
Breakfast - RR restaurant	.20
RR to Iowa City	2.52









Walk - Cottage to Roundhouse

4- 2x12 x 12 ft. for walk

Fix platform
4x4 10 ft.

Fin shingles 6x8 in.

In harden stone

150 shingles

Repair steps E. side of
main cottage

See if porch floor needs
bracing.

12 ft. - 2x10 - 1.
for porch E. side Lab.

1 - 2x6 - 10 ft. - 1
for platform E. side Lab.

Servant's cottage

Window frame - 26x10 - 1.
Partly. & glazing panes.

Ice-house

Roof - 16 ft. x 8 for each half
30 in. width.

2 1/2 5/2 16.

16

6
3
15

30

16
32
16
102
180

16

16
256

100

22
40
80
20
108

Fix E. door.

Pier & steps

2 planks on pier - use

Drive ^{old ones} ~~new~~ ^{ply} ~~lower~~
Place rail - lower steps

Rail just E. of bathroom
Fix door to boat house.

Cottage

Weight New window in
Stephens' room

Fence

Steps - South -

2 - 12 ft. 2x10 - plank.

Steps N

Name.

Kitchen

Fix - slide at ice box

New window - W side

Fix coal box

Fix floor - S. side dining

For Lab. 1 width.

Roofing

S. side. 37 ft. long.

W. side (N.W.) 19 ft. long.

N. side 29 ft.

40 -

40

Fix N. side of basement.

Pile lumber on support.

Hook ^{up} N. side basement.

Pump handle -

Fix staple on S. door.

Fix cur-rails - N.E.

Fence posts

N. side 17 11 (one at corner)

W. side ~~11~~ ~~11~~ ~~11~~ 1'

S. side ~~11~~ 11

27 posts

4 - old poles

23 -

Old posts pulled up new tent floor

House tent

Steps - E. side

Expenses - Olathe - June 7-8-1917
 Train Iowa City .25
 RR to Cedar Rapids .50
 RR to Spirit Lake 4.48
 Breakfast - dinner .75

Freight, Mountgum \$7.75
 25 pieces
 14 box 1 box bands etc
 2 tubs & 2 bundles paper,

1917
 Expenses to Portville
 Waverly - Aug 11-13
 RR Iowa City & Elgin 20
 RR Elgin to Portville 2.44
 Dinner - Hotel - Portville .60
 Hotel Allamakee, Waverly
 Supper, Room, Breakfast 2.25
 Dinner .60
 Hotel (Mrs. Hardy) New Albin 2.25 x 3 6.75
 Supper, Room, Breakfast, Lunch
 Hotel Allamakee Room & Breakfast 1.00
 Chaffman .00
 RR Portville to Cedar Rapids 1.98
 To Iowa City 69.50
 \$16.82

Trip to Brighton, Ia.
May 25, 1917.

Taxi	.25
RR. to Fairfield	2.08
Bus	.15
RR. to Mason Co	3.86
Bus	.25
Car fare	.05
RR. to Spirit Lake	2.42
Hotel	1.00
Supper restaurant	.35
Breakfast	.40
Team	3.50
RR. to Iowa City	5.54
Supper en route	.85

Franklin Flote

Shenandoah, Ia.

Miss Ella Smith

Gillett, Iowa, Ia.

Wanted to know from C.A.

for 3rd.

2.33

.15

2.05

4.53

